

GURKIRAT BINDRA

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Education

York University

September 2021 – April 2025

Bachelors of Engineering., Spec. Hons. - Software Engineering

Toronto, ON

Relevant Coursework

- Data Structures
- Machine Learning
- Software Development
- Systems Programming
- Computer Organization
- Embedded Systems
- Operating Systems
- Computer Architecture

Technical Skills

Languages: Python, Java, JavaScript, Swift, C, C++, HTML/CSS, SQL, Bash, Go, Verilog, R, MATLAB

Developer Tools: VS Code, Eclipse, Android Studio, Azure, Git, Google Cloud Platform (GCP), Google Firebase

Technologies/Frameworks: Linux, Jenkins, GitHub, Junit, RESTful APIs, AWS, SharePoint, Node, React

Experience

TNR Developers - Freelance

February 2022 – Dec 2023

Full Stack Developer Intern

Brampton, ON

- Developed mobile apps using **Java** alongside with **Swift** and **WebsApps** to enhance versatility and user experience.
- Streamlined user data management across **web** and **mobile** apps with **SharePoint** and **Google Firebase**.
- Played a key role in an **Agile SAFE** scrum team, applying expertise in **Git** and **project management**.
- Leveraged **DevOps** and **Go** for automation, streamlining project delivery and workflow management.
- Tested and engineered client network solutions with focus on **IP protocols** (**NETCONF**, **GRPC**, **gNMI**) and **infrastructures** (**LAN**, **WAN**, **WLAN**, and **Firewall configurations**) for enhanced security and connectivity.

Projects

Portfolio Website | HTML, CSS, JavaScript, VS Code

January 2024

- Developed a responsive personal website with **JavaScript**, **HTML5** and **CSS3** using **Microsoft Visual Studio**.
- **Improved** web traffic and **performance by 15 percent** through **SEO** optimization and **AWS** hosting tests.
- Conducted **GCP** and **SharePoint** content management workflows for consistent updates and maintenance.
- Validated deployment on **GitHub Pages**, ensuring optimal site availability and performance benchmarks.
- Verified dynamic content and data accuracy by testing **RESTful API** integrations with **Node.js** and **React.js**.

Flexx - Java Desktop App | Java, Git, Eclipse, MySQL

April 2023

- Developed a fitness planner app with advanced algorithms, utilizing **JavaFX** and **MySQL** databases, enabling users to create personalized workout plans.
- Conducted extensive QA on a **Java-based GUI** (Graphical User Interface), ensuring accurate real-time visualization of workout routines, leading to a **40 percent improvement in user interface efficiency**.
- Utilized **JUnit** for unit tests and **TestRail** for test case management, achieving **95 percent code coverage**, with defects tracked and resolved via **Jira**, ensuring high software quality.
- Streamlined **CI/CD** pipelines with **JUnit** for testing and **Git** for version control, utilized **Confluence** for QA documentation and **reduced bugs by 80 percent**.

Microwave Oven Embedded System | C, MCUXpresso, FRDM KL-43Z

March 2023

- Engineered an embedded microwave oven controller leveraging the **FRDM KL-43Z** board, programmed in **C** with **MCUXpresso SDK** for hardware interfacing, **GPIO manipulation**, and **UART communication**.
- Employed **fsl_gpio.h** for digital input/output configuration on **GPIO pins**, facilitating **relay activation**.
- Developed **LCD display interface** for status updates using **low-level C** library functions for control operations.
- Implemented **C-based debouncing algorithms** to stabilize button input for microwave operation control.
- Implemented **UART initialization** with a precise **Baud Rate** of 115200 for enhanced data transmission efficiency.

Automatic Plant Watering System | MATLAB, Arduino

October 2022

- Engineered an Automated Plant Watering System using **MATLAB** and **Arduino** integrated with a **MOSFET** board, soil moisture sensor and a water pump, demonstrating practical application of **IoT** principles.
- Integrated **AI algorithms**, including **decision trees** and **neural networks**, for predictive watering.
- Utilized sensor data processing for real-time adjustments, showcasing practical application of **AI** in responsive systems.

Leadership / Extracurricular

Visions Electronics

September 2017 – July 2021

Customer Service Representative

North York, ON

- Proficiently utilized **Windows** and **Linux OS** to enhance **customer service** efficiency and process optimization.
- Optimized customer service and process management using **Windows OS**, with enhanced reporting via **Windows 10**.
- Prioritized financial accuracy and **professionalism** in customer account adjustments using **MS Office Suite**.